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☐	L41	L40 and (user$1 near5 emotion$1)	30
☐	L40	(emotion$1 near5 analys$4) and @py<=2003	59
☐	L39	(emotion$1 near5 condition$1) and (emotion$1 near5 face$1) and (emotion$1 near5 map$4) and @py<2003	5
☐	L38	L37 and (emotion$1 near5 condition$1)	3
☐	L37	(emotion$2 and expression$1 and user$1).ti,ab. and @py<=2002	34
☐	L36	(emotion$1 and avatar$1 and analy$4).ti,ab. and @py<=2002	1
☐	L35	(avatar and emotion$1 and user$1 and generat$3 and map$4 and event$1) and @py<=2002	14
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☐	L31	L30 and (current near5 emotion$1)	2
☐	L30	(emotion$1 and generat$3 and map$4 and user$1 and input and analysis and event$1 and generat$3) and @py<=2002	114
☐	L29	(emotion$1 and pda and input$3 and process$3 and event$1 and analysis and module$1 and member$1) and @py<=2002	10
☐	L28	5406956.uref.	11
☐	L27	(emotion$1 near5 sens$3) and (emotion$1 near5 measurement$1) and @py<=2002	3
☐	L26	(emotion$1 near5 sens$3) and (emotion$1 near5 measurement$1) and (user$1 near5 input) and @py<=2002	0
☐	L25	(user$1 near5 emotion$1) and (computer network$3) and (emotion$1 near5 analysis) and (user$1 near5 input) and @pd<20030131	9
☐	L24	(user$1 near5 emotion$1) and (user$1 near5 event$1) and (sensor$1 near5 measurement$1) and (calculat$3 near5 emotion$1) and @py<=2002	0
		(user$1 near5 emotion$1) and (computer network$3) and (emotion$1 near5	

☐	L23	analysis) and (user$1 near5 input) and @py<20030131	11
☐	L22	L21 and (emotion$1 near5 input$3)	4
☐	L21	L20 and (communicat$5 near5 user$1)	14
☐	L20	(emotion$1 near5 analysis) and computer and network$3 and @py<=2002	24
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☐	L17	(community near5 service) and (user$1 near5 emotion$1) and (user$1 near5 input) and computer$1 and network$3 and @py<=2002	1
☐	L16	L15 and (emotion$1 near5 map$3)	1
☐	L15	L14 and (emotion$1 near5 analysis)	4
☐	L14	L13 and (emotion$1 near5 database$1)	5
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☐	L11	L10 and (network same wireless)	0
☐	L10	(user$1 near5 emotion$1) same (input near5 emotion$1) and (emotion$1 near5 condition$1) and @py<=2002	10
☐	L9	6629242.uref.	1
☐	L8	6219657.uref.	5
☐	L7	(emotion$1 near5 condition$1) same (user$1 near5 device$1) and @py<=2002	7
☐	L6	(emiotion$1 near5 condition$1) same (user$1 near5 input) and @py<=2002	0
☐	L5	(emiotion$1 near5 condition$1) same (user$1 near5 device$1) and @py<=2002	0
☐	L4	(community and social and organiz$6 and psychological and group and emotion$1 and icon$1) and @py<=2002	9
☐	L3	(organiz$6 and psychological and group and emotion$1 and icon$1) and @py<=2002	33
☐	L2	(organiz$6 and psychological and group and emotion$1 icon$1) and @py<=2002	0
☐	L1	(community and social and organiz$6 and psychological and group and emotion$1 icon$1) and @py<=2002	0

END OF SEARCH HISTORY

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Terms used **emotions** **conditions** **displaying**   Found **22,428** of **186,844**

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1   Work-in-progress: Using an adaptive display for the treatment of emotional disorders: ◼
◈   a preliminary analysis of effectiveness
    C. Botella, R. Baños, B. Rey, M. Alcañiz, V. Guillen, S. Quero, A. García-Palacios
    April 2006 **CHI '06 extended abstracts on Human factors in computing systems CHI
                '06**
    Publisher: ACM Press
    Full text available: 🅰 pdf(574.73 KB)   Additional Information: full citation, abstract, references, index terms

    A preliminary study on the use of an adaptive display for treating emotional disorders is
    presented. This adaptive display (named EMMA) varies the contents that are presented
    depending on the emotions of the user at each moment. The application has been
    designed to help in the treatment of Post-Traumatic Stress Disorder (PTSD) and
    Adjustment Disorder (AD). The specific objective of the present work is to test the
    effectiveness of this adaptive display, specifically the acceptance of the treatmen ...

    Keywords: adaptive displays, emotional disorders, transformation of virtual
    environments, treatment effectiveness, virtual space

2   Papers: embodied, emotional and believable agents I: The use of emotions to create ◼
◈   believable agents in a virtual environment
    Karthi Selvarajah, Debbie Richards
    July 2005 **Proceedings of the fourth international joint conference on Autonomous
                agents and multiagent systems AAMAS '05**
    Publisher: ACM Press
    Full text available: 🅰 pdf(431.85 KB)   Additional Information: full citation, abstract, references, index terms

    In the past emotions have been dismissed as a distraction to the logical, scientific thought
    process. More recently however, the importance of emotion in human-like intelligence and
    behaviour has been identified. This project aims at exploring this aspect of Artificial
    Intelligence by modeling the ability to display emotions in autonomous software agents
    within the constraints of a virtual environment. The motivation behind this is to determine
    whether the behaviour of these agents will cause th ...

    Keywords: emotion-based agent architecture, ostracism, psychology, virtual reality

3   ◼
    Papers: embodied, emotional and believable agents II: Catch me if you can:

exploring lying agents in social settings

Matthias Rehm, Elisabeth André

July 2005 **Proceedings of the fourth international joint conference on Autonomous agents and multiagent systems AAMAS '05**

Publisher: ACM Press

Full text available: pdf(416.00 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Embodied conversational agents become more and more realistic concerning their conversational and their nonverbal behaviors. But if the information conveyed nonverbally exhibits clues that are not consistent with the verbal part of an agent's action, how will the user react to such a discrepancy? Masking ones real emotions with a smile is a naturally occuring example of such a discrepancy. But such masks are often deficient and thus subtle clues of lying and deceiving manifest themselves in faci ...

Keywords: deception, embodied conversational agents, engagement, non-verbal behavior

4   Face to interface: facial affect in (hu)man and machine

Diane J. Schiano, Sheryl M. Ehrlich, Krisnawan Rahardja, Kyle Sheridan

April 2000 **Proceedings of the SIGCHI conference on Human factors in computing systems**

Publisher: ACM Press

Full text available: pdf(906.40 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Facial expression of emotion (or "facial affect") is rapidly becoming an area of intense interest in the computer science and interaction design communities. Ironically, this interest comes at a time when the classic findings on perception of human facial affect are being challenged in the psychological research literature, largely on methodological grounds. This paper presents two studies on perception of facial affect. Experiment 1 provides new data on the recognition of human f ...

Keywords: affect, affective computing, emotion, face, facial affect, facial expression of emotion, nonverbal communications

5   Late breaking results: posters: E-motional advantage: performance and satisfaction gains with affective computing

Lesley Axelrod, Kate Hone

April 2005 **CHI '05 extended abstracts on Human factors in computing systems**

Publisher: ACM Press

Full text available: pdf(227.90 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Emotions are now recognized as complex human control systems, crucial to decision making, creativity, playing and learning. Affective technologies may offer improved interaction and commercial promise. In the past, research has focused on technical development work, leaving many questions about user preferences unanswered. For this user-centered study, 60 participants played a simple 'word ladder' game under different controlled conditions. Using 2 x 2 factorial design, and a Wizard of Oz scenar ...

Keywords: affective computing, emotion recognition, human factors, human-computer interaction, wizard-of-oz

6   Collaborative technology and group process feedback: their impact on interactive sequences in meetings

Marcial Losada, Pedro Sanchez, Elizabeth E. Noble
September 1990 **Proceedings of the 1990 ACM conference on Computer-supported cooperative work**
Publisher: ACM Press

Full text available: pdf(1.11 MB)　　　Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

We analyzed group collaborative behavior by detecting patterns of interactive sequences in meetings using time series analysis. This is in contrast to previous work in which frequency counts of interactions were analyzed. Researchers have reported a decrease of these interaction frequencies associated with the use of computer-supported collaborative technology [Appl86, McGu87, Sieg86, Wats88]. We found that if group process feedback is given to people participating in a computer-supported c ...

7 <u>Designing design: Sense and sensibility: evaluation and interactive art</u>　■

Kristina Höök, Phoebe Sengers, Gerd Andersson
April 2003 **Proceedings of the SIGCHI conference on Human factors in computing systems**
Publisher: ACM Press

Full text available: pdf(611.92 KB)　　　Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

HCI evaluation methods are useful for improving the design of interactive systems, yet they may be rejected by nontraditional technology disciplines such as media art. We have developed a two-tiered evaluation model that responds to the concerns of interactive artists and have used it to improve the design of an interactive artwork, the Influencing Machine, exploring issues in affective computing. The method was interpretive, focusing on giving the artists a grounded feeling for how the machine ...

Keywords: affective computing, evaluation, interactive art

8 <u>Session F6: VR human motion and posture: The role of posture in the communication</u> ■ <u>of affect in an immersive virtual environment</u>

Vinoba Vinayagamoorthy, Andrea Brogni, Anthony Steed, Mel Slater
June 2006 **Proceedings of the 2006 ACM international conference on Virtual reality continuum and its applications VRCIA '06**
Publisher: ACM Press

Full text available: pdf(1.25 MB)　　　Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

This paper presents an experiment that investigates the importance of nonverbal behavioral cues when designing affective virtual characters for an immersive virtual environment (IVE).Forty-nine participants were each instructed to explore a virtual environment by asking two virtual characters for instructions in a CAVE™-like system. The underlying emotional state of the virtual characters was depicted through the use of nonverbal behavioral cues. We focus on two types of behavioral cues (f ...

Keywords: affect, co-presence, facial expression, immersive virtual environments, posture, presence, virtual characters

9 <u>Affective interaction: A first evaluation study of a database of kinetic facial</u> ■ <u>expressions (DaFEx)</u>

Alberto Battocchi, Fabio Pianesi, Dina Goren-Bar
October 2005 **Proceedings of the 7th international conference on Multimodal interfaces ICMI '05**
Publisher: ACM Press

In this paper we present DaFEx (Database of Facial Expressions), a database created with the purpose of providing a benchmark for the evaluation of the facial expressivity of Embodied Conversational Agents (ECAs). DaFEx consists of 1008 short videos containing emotional facial expressions of the 6 Ekman's emotions plus the neutral expression. The facial expressions were recorded by 8 professional actors (male and female) in two acting conditions ("utterance" and "no- utterance") and at 3 intensi ...

Keywords: databases, emotion recognition, expressiveness, quality of facial displays, user study

10 An investigation of the influence of network quality of service on the effectiveness of multimedia communication

Rob Procter, Mark Hartswood, Andy McKinlay, Scott Gallacher
November 1999 **Proceedings of the international ACM SIGGROUP conference on Supporting group work**
Publisher: ACM Press

In this paper we describe an experimental evaluation of multimedia packages intended for use as in-house training aids within a large UK bank. We focus on the influence of different kinds of media content and of network quality of service upon subjects' memory for, and comprehension of, the material. In particular, we observe that degraded quality of service has a greater influence on subjects' uptake of emotive/affective content than on their uptake of factual content. The results have imp ...

Keywords: multimedia evaluation, network quality of service, training, vicarious learning

11 Papers: embodied, emotional and believable agents I: ALMA: a layered model of affect

Patrick Gebhard
July 2005 **Proceedings of the fourth international joint conference on Autonomous agents and multiagent systems AAMAS '05**
Publisher: ACM Press

In this paper we introduce ALMA - A Layered Model of Affect. It integrates three major affective characteristics: emotions, moods and personality that cover short, medium, and long term affect. The use of this model consists of two phases: In the preparation phase appraisal rules and personality profiles for characters must be specified with the help of AffectML - our XML based affect modeling language. In the runtime phase, the specified appraisal rules are used to compute real-time emotions an ...

Keywords: embodied conversational characters, emotion, mood, personality, simulation of affect

12 Long papers: affective computing: Recognising emotions in human and synthetic faces: the role of the upper and lower parts of the face

Erica Costantini, Fabio Pianesi, Michela Prete
January 2005 **Proceedings of the 10th international conference on Intelligent user interfaces**
Publisher: ACM Press

Embodied Conversational Agents that can express emotions are a popular topic. Yet, despite recent attempts, reliable methods are still lacking to assess the quality of facial displays. This paper extends and refines the work in [6], focusing on the role of the upper and the lower portions of the face. We analysed the recognition rates and errors from the responses of 74 subjects to the presentations of dynamic (human and synthetic) faces. The results points to the possibility of: a) addressing t ...

Keywords: emotion recognition, expressiveness, face regions, synthetic faces, user study

13 Papers: A unified theory of irony and its computational formalization

This paper presents a unified theory of verbal irony for developing a computational model of irony. The theory claims that an ironic utterance implicitly communicates the fact that its utterance situation is surrounded by ironic environment which has three properties, but hearers can assume an utterance to be ironic even when they recognize that it implicitly communicates only two of the three properties. Implicit communication of three properties is accomplished in such a way that an utterance ...

14 Session 2C: life-like and believable qualities: Virtual humans personified

The focus of the virtual human research has recently shifted from modeling and animation towards imparting personalities to virtual humans. The aim is to create virtual humans that can interact spontaneously using a natural language, emotions and gestures. In this paper we present a system that allows the design of personality for emotional virtual human. We adopt the Five Factor Model (FFM) of personality from psychology studies. To realize the model, we use Bayesian Belief Network. We introduc ...

Keywords: bayesian belief network, facial animation, five factor model, personality modeling, virtual humans

15 We learn better together: enhancing eLearning with emotional characters

In this paper we explore a new direction for pedagogical computer characters, which we believe will maximize students' learning gains and enjoyment. To the traditional scenario where students interact primarily with a single coach or tutor character on-screen, we introduce the addition of both a social, animate colearner, and the student's own avatar character. Variations of the colearner's attributes, informed by research literature on

human partners, are explored through an online testbed appl ...

Keywords: colearners, evaluation of computer characters, language learning, pedagogical computer characters

16 <u>Objects of attention, desire, and fulfillment: Interacting with an embodied emotional character</u> ▪

Christoph Bartneck

June 2003 **Proceedings of the 2003 international conference on Designing pleasurable products and interfaces**

Publisher: ACM Press

Full text available: ▣ <u>pdf(479.32 KB)</u>   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

A salient feature of the ambient intelligent home of the future will be the natural interaction between the home and its inhabitants through speech. An embodied home character is necessary to ensure a natural dialogue by continuously providing intuitive feedback in the form of conversational and emotional body language. This study experimentally investigates the influence of the character's embodiment (screen character and robotic character) and its emotional expressiveness on the enjoyability o ...

Keywords: ambient intelligent home, character, embodied, emotion, enjoyability, robot

17 <u>Categorical imperative *NOT*: facial affect is perceived *continuously*</u> ▪

Diane J. Schiano, Sheryl M. Ehrlich, Kyle Sheridan

April 2004 **Proceedings of the SIGCHI conference on Human factors in computing systems**

Publisher: ACM Press

Full text available: ▣ <u>pdf(374.31 KB)</u>   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Facial affect (or emotion) recognition is a central issue for many VMC and naturalistic computing applications. Most computational models assume "categorical perception" of facial affect, in which a benign illusion promotes robust recognition of emotional expressions even under severe degradation conditions, including temporal compression. However, this applied interest in human facial affect perception is coming at a time when the evidence for categorical perception is being challenged in the b ...

Keywords: VMC, affect, affective computing, avatars, emotion, face, facial affect, facial expression of emotion, naturalistic computing, nonverbal communication, video compression

18 <u>A framework for the simulation of agents with emotions</u> ▪

Ana L. C. Bazzan, Rafael H. Bordini

May 2001 **Proceedings of the fifth international conference on Autonomous agents**

Publisher: ACM Press

Full text available: ▣ <u>pdf(227.48 KB)</u>   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

The Iterated Prisoner's Dilemma (IPD) has been used as a paradigm for studying the emergence of cooperation among individual agents. Many computer experiments show that cooperation does arise under certain conditions. However, little attention has been paid to aspects of emotions in this context. The goal of this work is thus to develop a framework for modelling agents with emotions. It allows the design of such agents, which interact with neighbours or their social groups. This paper descr ...

19 <u>Attitudes to new technology and experiential dimensions of two different digital</u>

games

Heikki Särkelä, Jari Takatalo, Jeppe Komulainen, Göte Nyman, Jukka Häkkinen
October 2004 **Proceedings of the third Nordic conference on Human-computer interaction NordiCHI '04**

Publisher: ACM Press

Full text available: 🔧 pdf(302.34 KB)   Additional Information: <u>full citation, abstract, references, index terms</u>

This paper describes the effect of attitudes to new technology on user experience in two different digital games. User experience is measured by using a framework which includes perceptual-attentive, cognitive-emotional and motivational constructs. They form four experiential dimensions; Physical presence, Emotional involvement, Situational involvement and Performance competence. Attitudes to new technology were measured by asking from the subjects how interested in new technology they were. ...

Keywords: attitudes, computer games, experience, involvement, presence

20 A reflexive, not impulsive agent

Catherine Pelachaud, Isabella Poggi, Berardina DeCarolis, Fiorella de Rosis
May 2001 **Proceedings of the fifth international conference on Autonomous agents**

Publisher: ACM Press

Full text available: 🔧 pdf(126.03 KB)   Additional Information: <u>full citation, abstract, references, index terms</u>

The aim of our present research is to build an Agent capable of communicative and expressive behavior. The Agent should be able to express its emotions but also to refrain from expressing them: a reflexive, not an impulsive Agent. A Reflexive Agent is an agent who thinks it over before displaying one's emotions, that is, one who, when feeling an emotion, &lquo;decides" not to display it immediately. In this paper we present our enriched discourse generator and we give a general overvi ...

emotions measuring degree

SEARCH

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Terms used **emotions measuring degree**   Found **30,258** of **186,844**

1   Novel methods: emotions, gestures, events: Measuring emotional valence during   ◼
       interactive experiences: boys at video game play
       Richard L. Hazlett
       April 2006 **Proceedings of the SIGCHI conference on Human Factors in computing systems CHI '06**
       Publisher: ACM Press
       Full text available: 📄 pdf(528.43 KB)   Additional Information: full citation, abstract, references, index terms

> This paper describes the use of facial electromyography (EMG) as a measure of positive and negative emotional valence during interactive experience. Thirteen boys played a car racing video game on an Xbox platform while facial EMG data were collected. Through video review positive and negative events during play were identified. The zygomaticus muscle EMG, which controls smiling, was found to be significantly greater during positive events as compared to negative. The corrugator muscle EMG, whic ...

> **Keywords:** affect, evaluation methods, games, physiological measurements, testing children

2   Blogs, wikis & rss: A social hypertext model for finding community in blogs   ◼
       Alvin Chin, Mark Chignell
       August 2006 **Proceedings of the seventeenth conference on Hypertext and hypermedia HYPERTEXT '06**
       Publisher: ACM Press
       Full text available: 📄 pdf(660.20 KB)   Additional Information: full citation, abstract, references, index terms

> Blogging has become the newest communication medium for creating a virtual community, a set of blogs linking back and forth to one another's postings, while discussing common topics. In this paper, we examine how communities can be discovered through interconnected blogs as a form of social hypertext [14]. We propose a method and model that detects structures of community in the social network of blogs by integrating McMillan and Chavis' sense of community [26] along with network analysis [8, 11 ...

> **Keywords:** blogs, hypertext, sense of community, social networks, virtual community

3   ◼
       Short talks-Specialized section: emotion: Measurement of user frustration: a biologic

approach
Richard Hazlett
April 2003 **CHI '03 extended abstracts on Human factors in computing systems**
Publisher: ACM Press
Full text available: pdf(213.97 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

This paper describes the use of facial EMG to provide a continuous measure of the user's emotional state. Facial EMG was recorded while female users performed five tasks to one of two web sites. Frustration index scores were developed from the corrugator EMG data by calculating a percentage score of a pre-task baseline. As predicted, the frustration index was greater for (1) novices as compared to experienced users, (2) incorrect as compared to correct answered tasks, and (3) for the web site th ...

Keywords: analysis methods (e.g. task/interaction modeling), e-Commerce, emotion and affective UI, usability testing and evaluation

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4   <u>Building blocks for effective education: Exploring user's emotional relationships with IT products: a structural equation model</u>
Poh Wah Khong, Jing Pu Song
June 2003 **Proceedings of the 2003 international conference on Designing pleasurable products and interfaces**
Publisher: ACM Press
Full text available: pdf(245.72 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

Decades of ergonomics research change the consumers' criteria by which they value and choose an IT product. Compared with the emphasis placed on new functions, reliability, and good after-service in past, emotional response to products has become an important user requirement to improve the customer acceptance in the market. This study develops a model and validates two specific antecedent variables-computer experience and capability-which are hypothesized to be fundamental determinants of users ...

Keywords: IT product, emotional response, structure equation model

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5   <u>Web home pages as advertisements</u>
Surendra N. Singh, Nikunj P. Dalal
August 1999 **Communications of the ACM**, Volume 42 Issue 8
Publisher: ACM Press
Full text available: pdf(190.03 KB)
html(40.84 KB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

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6   <u>Late breaking result papers: Communicating emotions in online chat using physiological sensors and animated text</u>
Hua Wang, Helmut Prendinger, Takeo Igarashi
April 2004 **CHI '04 extended abstracts on Human factors in computing systems**
Publisher: ACM Press
Full text available: pdf(354.88 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

We present a chat system that uses animateddynamic text associated with emotional information to show the affective state of the user. The system obtains the affective state of a chat user from a physiological sensor attached to the user's body. This paper describes preliminary experiments and provides examples of possible applications of our chat system. Observations from informal experiments comparing our animated chat

system with a conventional system suggest that an online interface that con ...

Keywords: affective computing, animated text, kinetic typography, online chat, physiological sensors

7   Emotion: Emotional advantage for adaptability and autonomy

Eugénio Oliveira, Luís Sarmento

July 2003   **Proceedings of the second international joint conference on Autonomous agents and multiagent systems**

Publisher: ACM Press

Full text available: pdf(219.39 KB)   Additional Information: <u>full citation, abstract, references, index terms</u>

During the last two decades, researchers have collected a decisive amount of experimental evidence about the fundamental role of Emotion on cognitive processing. Emotional phenomena have been correlated with effective decision-making processes, memory, learning and other high-level cognitive capabilities and skills (e.g. risk assessment). In this paper we will describe an ongoing work that aims to design new Agent Architectures influenced by what has been learned in psychology and neurosciences ...

Keywords: adaptability, cognition, emotion, simulation

8   Tangible products: redressing the balance between appearance and action

Tom Djajadiningrat, Stephan Wensveen, Joep Frens, Kees Overbeeke

September 2004   **Personal and Ubiquitous Computing**, Volume 8 Issue 5

Publisher: Springer-Verlag

Full text available: pdf(1.22 MB)   Additional Information: <u>full citation, abstract, index terms</u>

Over the past decade, our group has approached interaction design from an industrial design point of view. In doing so, we focus on a branch of design called "formgiving"Whilst formgiving is somewhat of a neologism in English, many other European languages do have a separate word for form-related design, including German (Gestaltung), Danish (formgivnin), Swedish (formgivning) and Dutch (vormgeving).Traditionally, formgiving has been concerned with such aspects of objects as form, co ...

Keywords: Ecological psychology, Industrial design, Semantics, Tangible interaction

9   International learning in an international world

Margaret Martinez

February 2000   **ACM Journal of Computer Documentation (JCD)**, Volume 24 Issue 1

Publisher: ACM Press

Full text available: pdf(203.43 KB)   Additional Information: <u>full citation, abstract, references, citings, index terms</u>

How do we support successful, lifelong learners and performers and help them competently respond to rapidly changing opportunities in the 21st century. The answer to this question lies in how well we understand audiences differentiated by key learning differences and consider how these differentiations influence winning learning and performance. Historically, cognitive-rich explanations have tended to underplay the dominant impact of affective and conative factors on thinking and learning. Recen ...

10

E-marketing & e-businesses: An empirical study of Customer Loyalty of the

telecommunication industry in China

Jun Xue, Bin Liang

August 2005 **Proceedings of the 7th international conference on Electronic commerce ICEC '05**

Publisher: ACM Press

Full text available: pdf(345.64 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>

Starting with the connotation of the Customer Loyalty, this article sums up the three significant characteristics, and considers that as a basis for setting up the model of the Customer Loyalty driving factors of Chinese telecommunication industry. It adopts the method of the empirical study to discuss the factors, which influence the Customer Loyalty of telecommunication industry to investigate the formation mechanism, development and control of Customer Loyalty by applying the data mining. Mor ...

Keywords: expected repurchase, long-term purchase, recommendation, service, staff loyalty, switching cost, trust

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11 Work-in-progress: Understanding how bloggers feel: recognizing affect in blog posts

Gilly Leshed, Joseph 'Jofish' Kaye

April 2006 **CHI '06 extended abstracts on Human factors in computing systems CHI '06**

Publisher: ACM Press

Full text available: pdf(414.37 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>index terms</u>

One of the goals of affective computing is to recognize human emotions. We present a system that learns to recognize emotions based on textual resources and test it on a large number of blog entries tagged with moods by their authors. We show how a machine-learning approach can be used to gain insight into the way writers convey and interpret their own emotions, and provide nuanced mood associations for a large wordlist.

Keywords: affective computing, blogs, emotions

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12 Fourier principles for emotion-based human figure animation

Munetoshi Unuma, Ken Anjyo, Ryozo Takeuchi

September 1995 **Proceedings of the 22nd annual conference on Computer graphics and interactive techniques**

Publisher: ACM Press

Full text available: pdf(113.90 KB)
ps(2.43 MB)   Additional Information: <u>full citation</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Keywords: Fourier analysis, emotion, human figure animation

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13 Face to interface: facial affect in (hu)man and machine

Diane J. Schiano, Sheryl M. Ehrlich, Krisnawan Rahardja, Kyle Sheridan

April 2000 **Proceedings of the SIGCHI conference on Human factors in computing systems**

Publisher: ACM Press

Full text available: pdf(906.40 KB)   Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index terms</u>

Facial expression of emotion (or "facial affect") is rapidly becoming an area of intense interest in the computer science and interaction design communities. Ironically, this

interest comes at a time when the classic findings on perception of human facial affect are being challenged in the psychological research literature, largely on methodological grounds. This paper presents two studies on perception of facial affect. Experiment 1 provides new data on the recognition of human f ...

Keywords: affect, affective computing, emotion, face, facial affect, facial expression of emotion, nonverbal communications

14 Intentional learning in an intentional world: new perspectives on audience analysis and instructional system design for successful learning and performance

Margaret Martinez
October 1999 **Proceedings of the 17th annual international conference on Computer documentation**
Publisher: ACM Press
Full text available: pdf(1.31 MB)   Additional Information: full citation, abstract, references, index terms

How do we support successful, lifelong learners and performers and help them competently respond to rapidly changing opportunities in the 21st century. The answer to this challenging question lies in how well we consider diverse sources for successful learning and explain audiences differentiated by individual learning differences. After years of primarily cognitive traditions, lack of strong theoretical foundations, and imperfect one-size-fits-all designs, our cognitive-ri ...

Keywords: audience analysis, individual learning differences, instructional design, learning orientations

15 Dynamic response: real-time adaptation for music emotion

Steven R. Livingstone, Andrew R. Brown
November 2005 **Proceedings of the second Australasian conference on Interactive entertainment IE2005**
Publisher: Creativity & Cognition Studios Press
Full text available: pdf(172.65 KB)   Additional Information: full citation, abstract, references, index terms

Music plays an enormous role in today's computer games; it serves to elicit emotion, generate interest and convey important information. Traditional gaming music is fixed at the event level, where tracks loop until a state change is triggered. This behaviour however does not reflect musically the in-game state between these events. We propose a dynamic music environment, where music tracks adjust in real-time to the emotion of the in-game state. We are looking to improve the affective response t ...

Keywords: computer music, emotion, music

16 Posters & demos: Physiological data feedback for application in distance education

Martha E. Crosby, Brent Auernheimer, Christoph Aschwanden, Curtis Ikehara
November 2001 **Proceedings of the 2001 workshop on Perceptive user interfaces PUI '01**
Publisher: ACM Press
Full text available: pdf(1.12 MB)   Additional Information: full citation, abstract, references

This paper describes initial experiments collecting physiological data from subjects performing computer tasks. A prototype realtime Emotion Mouse collected skin temperature, galvanic skin response (GSR), and heartbeat data. Possible applications to distance education, and a second-generation system are discussed.

17 Automated Facial Expression Classification and affect interpretation using infrared measurement of facial skin temperature variations

Masood Mehmood Khan, Michael Ingleby, Robert D. Ward
September 2006 **ACM Transactions on Autonomous and Adaptive Systems (TAAS)**,
Volume 1 Issue 1
Publisher: ACM Press
Full text available: pdf(1.80 MB)   Additional Information: full citation, abstract, references, index terms

Machines would require the ability to perceive and adapt to affects for achieving artificial sociability. Most autonomous systems use Automated Facial Expression Classification (AFEC) and Automated Affect Interpretation (AAI) to achieve sociability. Varying lighting conditions, occlusion, and control over physiognomy can influence the real life performance of vision-based AFEC systems. Physiological signals provide complementary information for AFEC and AAI. We employed transient facial thermal ...

Keywords: Automated affect recognition, facial expression classification, infrared thermal imaging, socially intelligent machines

18 A design method for "whole-hand" human-computer interaction

David J. Sturman, David Zeltzer
July 1993 **ACM Transactions on Information Systems (TOIS)**, Volume 11 Issue 3
Publisher: ACM Press
Full text available: pdf(1.31 MB)   Additional Information: full citation, references, citings, index terms

Keywords: input devices, interaction techniques, interface design, user interface, virtual environments

19 Stigma and the sensorial experience of objects: A wheelchair can be fun: a case of emotion-driven design

Pieter Desmet, Eva Dijkhuis
June 2003 **Proceedings of the 2003 international conference on Designing pleasurable products and interfaces**
Publisher: ACM Press
Full text available: pdf(1.45 MB)   Additional Information: full citation, abstract, references, citings, index terms

In this paper an approach to emotion-driven design is introduced and demonstrated with a children's wheelchair design case. First, emotional responses towards existing wheelchairs have been assessed with a non-verbal self-report instrument. The results of this assessment were transformed to starting points for a new design with the use of a theoretical model of product emotions. With these starting points a new design was created and detailed into a working prototype. In a second study, the emot ...

Keywords: emotion-driven design, non-verbal measurement, wheelchair

20 Work-in-progress: Measuring multiple components of emotions in interactive contexts

Sascha Mahlke, Michael Minge, Manfred Thüring
April 2006 **CHI '06 extended abstracts on Human factors in computing systems CHI '06**
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Full text available: pdf(422.54 KB)   Additional Information: full citation, abstract, references, index terms

The study of users' emotional behavior in HCI has been receiving increasing attention for the last few years. This paper focuses on emotions as an important part of a user's overall experience when interacting with a system. Based on the multi-component approach to emotions proposed by Scherer [15], different aspects of emotions in an interactive context were investigated: subjective feelings, physiological activation, motor expression, cognitive appraisals, and behavioral tendencies. To induce ...

Keywords: emotion, methods, psychophysiology, system evaluation, user experience